

AMENDMENTS TO THE CLAIMS

1. (currently amended) A segmented annular mold for forming a tread belt having a reinforcing belt structure having a radial thickness (t), the mold comprising:
a plurality of ~~radially movable and outwardly expandable~~ stationary inner segments for forming the inner surface of the tread belt; and
a plurality of radially movable ~~and contracting~~ outer mold segments for forming the outer tread belt surface wherein the radially inner and radially outer segments form a mold parting line ~~at a location radially outward of a midpoint of the belt reinforcing structure of the tread belt at a location greater than 50% (t) as measured from the radially innermost surface of the belt reinforcing structure.~~
2. (original) The segmented mold of claim 1 wherein the radially inner segments have upper and lower lateral edge forming portions extending outwardly to the parting line.
3. (original) The segmented mold of claim 1 wherein the radially outer mold segments have upper and lower lateral edge forming portions extending inwardly to the parting line.
4. (currently amended) The segmented mold of claim 1 further comprising wherein the parting line is located at least radially outwardly of a radially inner second belt layer of the belt reinforcing structure a slidable hub assembly, the slidable hub assembly having a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments, each circumferentially adjacent inner segment being connected to either the upper or lower hub portion in an alternating pattern, the movement of one of the hub portions relative to the other hub portion being independently actuated by one or more means for moving the hub portions, and wherein the movement of the lower and upper hub portions into interlocking alignment moves the inner segments to form an annular ring.

5. (original) The segmented mold of claim 4 wherein the tread belt has a radially inner 0° wire reinforced layer, two or more cross angled wire reinforced belt layers integrated between a 90° wire reinforced belt layer and the 0° wire layer; and

the mold parting line is located radially between or above the radially outermost cross ply layer and the 90° wire reinforced layer.

6. (currently amended) A segmented annular mold for forming a tread belt comprising:

a plurality of outer tread belt forming segments;

a plurality of radially movable and outwardly expandable inner segments for forming the inner surface of the tread belt;

a slidable hub assembly, the slidable hub assembly having a central shaft, an upper hub portion and a lower hub portion each slidably mounted onto the central shaft; each upper and lower hub portions having a plurality of linkage arms pivotably connected to the respective hub portion and the radially inner segments, each circumferentially adjacent inner segment being connected to either ~~an~~ the upper or lower hub portion in an alternating pattern, the movement of one of the hub portions relative to the other hub portion being independently actuated by one or more means for moving the hub portions, and wherein the movement of the lower and upper hub portions into interlocking alignment moves the inner segments to form an annular ring.

7. (currently amended) The segmented annular mold for forming a tread belt of claim 6 further comprising:

a plurality of split "J" J frames, one split slide "J" J frame for supporting each outer tread belt forming segment.

8. (currently amended) The segmented mold for forming a tread belt of claim ~~8~~ 7, further comprises:

a base plate support attached to each split J frame;

a plurality of linear bearing ~~rolls~~ rails and bearing blocks, the bearing blocks being

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attached to the inner and outer segments, a pair of the linear bearing rails providing linear guides for the segments.

9. (currently amended) The segmented mold for forming an annular tread belt of claim 6 ~~8~~ further comprises:

a cooling plate interposed between each segment and the linear bearing blocks attached to the respective segment.

10. (original) The segmented mold for forming a tread belt of claim 9 wherein the cooling plate has a plurality of passages for passing a coolant medium.

11. (withdrawn) A method of molding an annular tread belt comprises the steps of:
providing an open segmented annular mold for receiving and forming a tread belt having a reinforcing belt structure having a radial thickness (t), the mold having a plurality of radially movable and outwardly expandable inner segments for forming the inner surface of the tread belt and a plurality of radially movable and contracting outer segments for forming the outer tread belt surface wherein the radially inner and radially outer segments form a mold parting line at a location radially outward of a midpoint of the belt reinforcing structure of the tread belt at a location greater than 50% (t) as measured from the radially innermost surface of the belt reinforcing structure;

inserting a tread belt into the open mold;

closing the mold; and

curing the tread belt.

12. (withdrawn) The method of claim 11
wherein the step of closing the mold includes the steps of
moving a plurality of circumferentially alternating inner segments into radial contact with the tread belt;

moving a plurality of outer segments into contact with the tread belt, the tread belt contacting outer segments being aligned with the contacting inner segments;

moving the remaining inner segments into contact with the tread belt;

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moving the remaining outer segments into contact with the tread belt; and then moving all outer segments to a fully closed mold curing position.

13. (withdrawn) The method of claim 11 wherein the step of curing the tread belt includes the step of pushing either the inner segments radially inwardly or the outer segments radially outwardly to allow the parting line to gap under thermal expansion of the rubber as the tread belt is cured.

14. (withdrawn) The method of claim 13 wherein the inner segments are restrained mechanically and the outer segments are allowed to move radially outwardly.

15. (withdrawn) A tread belt comprising
a radially outer tread;
a belt reinforcing structure, the belt structure having at least a radially inner layer of 0° circumferentially extending wires, a pair of cross ply layers and a radially outer layer of 90° laterally extending wires; and
a parting line radially outward of the radially inner layer and at least one of the layers of the cross ply layers.

This listing of claims will replace all prior versions and listings of claims in the application.